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INTEGRATION OF INFORMATION FOR HOSPITAL RATE SETTING

VOLUME 8: INFORMATION AVAILABLE FOR RATE SETTING BY THE MARYLAND HEALTH SERVICES COST REVIEW COMMISSION

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by

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PREFACE

This is one of a series of working papers in a project whose task is to explore the types of information required to permit equitable hospital rate setting, and the obstacles to its access, integration and use.

As part of the effort to identify the general scope of information required to establish hospital rates, analysis was made of the information presently employed in five different states: Arizona, Maryland, Massachusetts, New York and Washington. This report on Maryland like those on the other states, was based on an examination of the various reporting forms employed and other background materials, together with interviews with officials both in the agency responsible for administering the rate setting program and in the hospital association.

The report attempts to cover the relation of the information collected to the program's particular objectives and rate setting process, the types of data available, and the history of how the reporting system was developed. The characteristics of the reporting system are described and illustrated in charts or exhibits. Problems of validating, managing and using the information are discussed. Finally an appraisal of the strengths and limitations of the information system is made according to criteria developed as part of this project and presented in the proceedings of its 1975 Conference on Uniform Reporting for Hospital Rate Reviews.

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I. BACKGROUND

In 1971 the Maryland legislature, with the strong backing of the Governor and the Maryland Hospital Association, passed a law establishing the Health Services Cost Review Commission (HSCRC). The Commission, an independent agency whose seven members are appointed by the Governor, was empowered to set rates for Maryland's 47 hospitals beginning July 1, 1974.* As of this writing (in March 1976), the rate setting authority extends only to hospital reimbursement from Blue Cross, commercial insurance and self-pay patients; neither the Medicaid nor Medicare programs have yet agreed to accept the Commission's rates for their program payments.

Although HSCRC must approve changes that any hospital makes in its charges, the Maryland rate-setting process differs from those of most other prospective reimbursement programs in that the Commission directly intervenes in only a small proportion of the hospitals' rate actions each year. Instead, from time to time it grants statewide percentage rate increases, geared to inflation of wages and prices measured by movements of general economic indicators. Any hospital may, if it wishes, request rate increases beyond those allowed by the inflation adjustment, either for some special purpose, such as the opening of a new service, or on a plea of general hardship. However, any such rate reopening makes the hospital subject to an across-the-board review by HSCRC staff of its utilization rates and unit costs, possibly followed by a public hearing and, in due course, a Commission rate order. This special review process can also be initiated by the Commission when its staff analysis finds one or more cost centers in a hospital to be out of line.** "Out of line" is

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* The Commission will begin setting rates for long-term-care institutions in Maryland beginning July 1, 1976.

** During the first 18 months of its rate setting operations, the Commission received about 70 rate increase requests from hospitals, the majority of which involved only minor reviews. In addition, the Commission conducted 15 full-scale major reviews.

currently defined to mean that a hospital's costs are above the 80th percentile in its group. (HSCRC classifies hospitals in one of two groups: urban-suburban or rural. In addition, for many types of analyses, it treats Maryland's two teaching hospitals as a separate category.) When special reviews are called for, the Commission sometimes issues its final rate orders many months after the close of the hospital's fiscal year.

This selective review process reflects the Commission's acknowledged inability to deal adequately with the mass of information that it annually collects from hospitals. Given a limited staff for budget analysis - currently about ten people - the policy decision was made to review a few hospitals in depth each year rather than attempt universal reviews that would perforce have to be more superficial.

Program Objectives

The Maryland law charges the Commission with assuring the public that:[1]

- a hospital's total costs are reasonably related to the total services offered;
- a hospital's aggregate rates are reasonably related to its aggregate costs;
- rates are set equitably among all purchasers or classes of purchasers without undue descrimination.

The legislature defined its criteria of "reasonable rates" as those which would permit any non-profit institution to render "efficient and effective service in the public interest on a solvent basis." Rates to proprietary institutions are, in addition, to provide an allowance to investors for a fair return on fair value. The law requires full public disclosure of the financial conditions of hospitals and of all the Commission's routine analytic reports.

Through its regulations and guidelines the Commission has translated its mandate into several programmatic objectives. Thus, in order to

learn whether hospital costs are reasonably related to total services, it seeks to:

- isolate and compare the direct costs of each major unit of patient care service before allocation of general service functions and other allowable hospital services (such as cost of nursing education, bad debts, etc.);

- examine the reasonableness of certain special areas of direct cost such as the compensation of hospital based physicians, and prices paid for supplies;

- penalize underutilization of particular services that results in higher unit costs, i.e., encourage the phase out of under-utilized nursing stations - both in individual hospitals and in hospitals throughout a geographic area;

- discourage facility and program expansions that would lead to future excess standby capacity, not only in the individual hospital but in the region served by that hospital.

In order to ensure that a hospital's aggregate rates are reasonably related to its aggregate costs, the Commission attempts to:

- identify and eliminate internal cross subsidies, whereby revenues from one hospital cost center support costs from another.

In order to set rates equitably among all payers it requires Blue Cross subscribers, through their premiums:

- to join self-pay patients in making up hospitals' losses from bad debts incurred from whatever sources, e.g., Medicare and Medicaid shortfalls, bad debts from patients insufficiently covered by commercial insurance, the medically indigent, etc.;

- to accommodate to smaller Blue Cross discounts than in the past.

Finally, in order to permit efficient and effective hospitals to remain solvent, it tries to:

- favor such hospitals in rate requests for program and facility expansions where community need for such expansions has been established;

- seek solutions in cases where such hospitals' resources are inadequate.

Both hospitals and the Maryland Blue Cross plan question whether certain of these programmatic objectives are in keeping with the intent of the Commission's law; legal challenges are currently wending their way through the courts.

Statutory Authority to Collect Data

The law requires the Commission to cause:

> . . .the public disclosure of (1) the financial position of all hospitals and related institutions and (2) the verified total costs actually incurred by each such institution in rendering health services, computed by methods the commission prescribes. . .

It also gives the Commission the authority to:

> a) . . .specify a uniform system of accounting and financial reporting, including such cost allocation methods as it may prescribe, by which hospitals and related institutions will record their revenues, expenses, and other outlays, assets and liabilities. . .and units of service.
>
> b) . . .allow and provide for modifications in the accounting are reporting system in order to correctly reflect differences in the scope or type of services and financial structure between the various categories, sizes or types of institutions.
>
> c) . . .hold hearings, conduct investigations and require the filing of information relating to any matter affecting the cost of services in all institutions. . .and to subpoena witnesses, papers, records and documents in connection therewith. . .

Thus the Commission has a clear legal mandate to collect the types of data it may deem necessary for its rate decisions.

The Commission has published its accounting, reporting and budget system requirements, and its plans for analysis and use of the data in a series of documents: the Accounting and Reporting System for Hospitals (April 1, 1973); Guidelines for Commission Staff Rate Review (May 1974, and

April 1975 revised); and Budget Manual Instructions (May 1974, and November 1975, revised). Most of the requirements set forth in these documents have to do with hospital reporting of cost, revenue and units of service. In addition, regulations promulgated in March 1976 and effective July 1976 require hospitals to report routinely certain patient related data.

II. TYPES OF DATA AVAILABLE

The Commission receives financial and service volume data from the cost and budget reports submitted annually by the hospitals. These reports, together with reports from the Bureau of Labor Statistics, yield the major portion of the data presently used by the Commission.

Costs, Volumes and Budgets

For their fiscal years beginning in 1974 and 1975, hospitals had to make separate filings of their base (immediately prior) year costs, and of their budgets. Furthermore, because of the timetable for submitting the base year cost reports, only nine months of actual costs could be included; the remaining three months had to be estimated. The cost and budget reports are now being consolidated, and for the 1977 rates the cost reports will cover the full 12 months of the base year with an accompanying audited financial statement. According to the proposed new timetable, hospitals will submit their cost budget package to HSCRC at the end of September, three months after the beginning of their new fiscal year.

The cost/budget package includes an audited financial statement, and details of prior and projected volume, operating and capital expenses and revenue that will be described in subsequent sections of this paper. They also call for statements of the hospitals' capital assets, fund balances and gifts, donations and grants received during the report year. Because the Commission ennunciates the principle that hospitals should draw on revenue from unrestricted funds to offset certain current costs of funding

plant, equipment, charity, research and education before rates are increased to support such costs, some Maryland hospitals, in defensive moves, established separate corporate trusts to administer their endowment funds.[2] Hospitals are required to report income from these trusts but some have refused to do so. The subpoena power of the Commission in this regard are being tested in the courts.

Physician Compensation

The terms of contractual agreement with physicians must be reported, as well as their time on site, and the proportion of such time devoted to administration, patient care, education and research. Hospitals must also report any substantial transactions and business they conduct with firms in which their trustees are employed or which they own any significant share.

Scope of Services, and Quality

Differences in range and types of services in Maryland hospitals could be analyzed from data reported on the cost/budget forms. However, since such differences are not factored into HSCRC's rate approval process, no such analyses are routinely made. No reports are required to show numbers of the hospital's attending medical staff in toto, or by specialty or by board certification status. The cost/budget reports do, however, require such information for physicians on salary to the hospital or under contract for services. Nor does HSCRC seek common process measures of quality such as Joint Commission accreditation status, the approval status of residencies and internships, or medical audits. The presence of education programs, such as nursing education, School of Medical Technology, etc., is reported only in terms of costs and revenues; HSCRC does not ascertain their approval or certification status.

Casemix and Patient Data

As noted earlier, recent regulations of the Commission will require Maryland hospitals to submit, in aggregated form, certain patient related data collected by each institution from a prescribed Uniform Hospital Discharge Abstract Data Set. This data set, for the most part, follows the form set forth by the Department of Health, Education and Welfare in the Federal Register on January 19, 1976, for hospitalized patients in federal programs, to be used by the Bureau of Quality Assurance and the Social Security Administration (for a 20 percent sample). However, responding to strong protests by physicians and the Maryland Hospital Association, the Social Security number identifier for patients and physicians was dropped. The patient's medical record number and the physician's hospital number replace these items.

Reports based on the abstracts of all patients treated by each hospital will give HSCRC profiles of principal diagnoses related to secondary diagnosis, major procedures performed, length of stay, expected source of payment, discharge disposition and total charges. The item of total charges to the patient constitutes the only addition to the UHDDS proposed at the federal level. Demographic profiles of patients served by hospitals, including age, sex, race and patient residence by zip code will also be created.

Management of the patient abstract data will be through an independent information broker system, the Maryland Resource Center, Inc., established for the purpose. It will be responsible for reconciling discharge abstract reports containing the data set from PAS and other systems, for monitoring the quality of the data, for developing agreements on disclosure and for producing reports for various authorized users: PSROs, planning agencies, HSCRC and hospitals. This arrangement is the fruit of more than five years of planning effort. HSCRC is not represented on the governing board, which is dominated by PSRO and hospital representatives.

Data for Rate Adjustments Related to Hospital Expansions

Before HSCRC will consider additions to the rate structure to pay increased costs associated with facilities expansion, it requires approvals from the Maryland Comprehensive Planning Agency, the state's certificate of need agency. It also receives all information submitted by applicant hospitals on a form its staff jointly developed with MCHPA. However, the HSCRC staff independently acquires and analyzes their own planning data on an ad hoc basis. Even if formal planning approvals are in hand, the Commission may independently determine not to allow a hospital's charges to be increased to support increased expenses stemming from what it considers to be unneeded facility or program expansions.* The planning information HSCRC uses for these decisions includes:

- travel time to existing facilities by the population to be served, as estimated by HSCRC staff;
- utilization levels by service in existing facilities found to be accessible, derived from the hospitals' cost/budget reports;
- cost impact of the proposed expansion, both on the applicant institution and its neighboring institutions, estimated by the applicant hospital and HSCRC staff.

As part of this process, the HSCRC staff develops "target" beds that will be needed in an area, and for each hospital. These are defined as the average number of occupied beds plus a standby allowance. So far, however, HSCRC lacks data to define individual hospital service areas, and thus cannot relate population data to them. In fact, it does not use population projections for developing its target beds. No long term capital budgets are required from the hospitals to alert HSCRC to their expansion plans.

Each hospital planning a facility or a new or expanded medical program is expected to furnish as part of its cost/budget reports estimates

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* For details on the Maryland guidelines relating to hospital facility and program expansion, and HSCRC's relation to the Maryland certificate of need program, see Drew Altman, Connections Between Rate Setting and Planning in Maryland and Rhode Island, Working Paper R-45-6 in this series.

of the program's projected impact on its volumes of service and its fixed costs. It must also project the impact of the expansion on volumes of service in the other hospitals of its region. However, the methodology the hospital should follow in making such predictions is not spelled out. Nor are "regions" defined.

The Commission employs Haskins and Sells to calculate the replacement costs of hospital beds and their standard expected life. The current bricks and mortar costs of replacement, now projected to be about $50,000 per bed, are derived from an analysis by this firm of the construction costs of certain hospitals in Pennsylvania recently built by a for-profit chain.* In calculating their capital facility allowances, a factor was introduced in the Maryland program as an alternative to the traditional depreciation allowance for building replacement. Hospitals are required to use the figures on target beds and bed replacement costs supplied them by HSCRC. Depreciation continues to be allowed for major equipment on the basis of replacement value.

Economic Trend Indicators

In determining allowed increases in hospital rates to accommodate to inflation, the Commission uses items from economic indicator series. For estimating wage increases in these regions, HSCRC uses the movements of Bureau Labor Statistics hourly wages for non-managerial positions as surrogates for hospital labor as follows:

Baltimore metropolitan area hospitals	- Consumer Price Index; hourly, non-supervisory labor items for Baltimore

* The Commission states that "the $50,000 figure relates mainly to bricks and mortar costs. Three or four hospitals (proprietary and non-proprietary) have been built at this cost." Communication from Frank M. Hall, Jr., Health Services Cost Review Commission, February 27, 1976.

D.C. metropolitan area hospitals	- Consumer Price Index; hourly, non-supervisory labor items for Washington
hospitals in the remainder of the state	- Consumer Price Index; hourly, non-supervisory labor items, national.

Fuel and malpractice cost increases are treated as passthroughs. An inflation factor for raw food is calculated by a simple average of the previous 12 month average increases in the Wholesale Price Index and the Consumer Price Index.

Historical Data

As we have seen, HSCRC regularly collects data on the prior year experience of hospitals from their annual cost/budget submissions. In addition, before it began rate-setting operations HSCRC made special efforts to collect certain historical data. Aware that its future cost analyses would be handicapped by lack of financial data prior to the hospitals' fiscal year beginning after July 1973 (submitted on its first required cost report), in 1972 HSCRC requested the hospitals to submit their:

- latest beginning and ending fiscal year audited balance sheets;
- latest statement of income and expenses;
- a copy of their latest Medicare report.

A few months later they were asked to submit data for each of the prior ten years, as follows:

- inpatient days
- average cost per patient day
- occupancy rate
- average length of stay
- number and cost of outpatient department visits
- total operating expenses
- bottom line profits or losses
- room rates by types of accomodation.

This data is now available for trend analysis. It was, of course, unaudited.

Data for Current Year Monitoring

The Commission obtains quarterly reports from each hospital on its actual volume for each patient care service center compared to projected volume. It plans corresponding reports that compare actual to projected revenues for the quarter. It is planned that hospital casemix profiles will also be reported on a quarterly basis.

The economic indicators used as the basis for the Commission's inflation index are monitored continuously. Statistics from the Bureau of Labor Statistics are accumulated each month and the most current 12 month rate of inflation is calculated.

III. HOW THE REPORTS WERE DEVELOPED

HSCRC employed Haskins and Sells to develop the Maryland Chart of Accounts and the reporting system forms and manuals. The choice was not popular. One outside observer in Maryland comments: "Haskins and Sells was the only major accounting firm with no conflict of interest--because they knew absolutely nothing about hospitals." Although the Commission organized a Rate Setting Methodology Committee representing the hospital industry, meetings of this body were mainly devoted to issues of rate review and approval methodology, rather than information system design.

The Maryland chart is primarily based on the 1964 revision of the A.H.A.'s chart. However, it incorporated certain features from the Hospital Audit Guide prepared by the American Institute of Certified Public Accountants, and from the California Hospital Association's recommendations to the California Hospital Commission in September 1972, particularly as regards adopting relative value scales for units of measure for ancillary services.

Finally, the new cost and budget reporting system drew heavily on previous efforts to improve the quality of hospital financial data by

a Maryland Hospital Association (MHA) task force. This task force, known as Project Advance, introduced the concept of reporting to external reviewers in terms of hospital functions rather than according to the responsiblity centers that are organized differently in each hospital to reflect its unique structure, and HSCRC's new reporting system followed suit.

There were five subcommittees on this MHA task force, each of which worked on particular areas, namely accounting, reporting, budgeting, cost finding principles and capital financing. Some of this work, which took place during the period 1970-72, is directly reflected in the HSCRC's reporting system, especially as it defined particular functional cost centers and advocated the identification of direct costs related to standard units of measure before allocation of indirect costs. However, MHA officials state that the Commission ignored some valuable features of its report, and that the resultant reporting format is confusing because hospitals had little voice in the design process.

There was no pretesting of the original report forms. They were not officially approved until April 1973, with mandatory recording of costs and statistics beginning in the following July (for reports to be filed with the Commission on July 1, 1974.) A revised version was issued in December 1975, with no substantial changes but with improved organization.

Introducing the New Reporting System

Because so little time was available between the time the report forms were adopted and the time the system had to be implemented, training in their use was quite minimal. HSCRC offered two-day training sessions conducted by Haskins and Sells. Unfortunately, as the Commission now realizes, they were attended by hospital administrators rather than financial officers. Although some technical assistance was offered to hospitals

after the first cost report submissions revealed difficulties, HSCRC budget constraints limited their scope.

The switch to the new reporting system was perhaps easier than it might be in other areas of the country since Maryland hospitals already had considerable sophistication in financial reporting. Since 1960 the hospitals have been submitting cost reports to a non-profit cost finding and audit body, the Hospital Cost Analysis Services (HCAS), and in the late 1960s had been involved through it in a Social Security cost containtment experiment that entailed detailed scrutiny of department costs related to performance (using the A.H.A.'s Hospital Administrative Service reports as indicators.) In addition, many hospital officials had served on subcommittees of the Maryland Hospital Association's Project Advance. Thus, the hospitals were not overwhelmed by the task of filling out the HSCRC reports, although many of them had trouble with the relative value scales. One hospital costed out its initial report filing in detail; it amounted to $12,000. For many hospitals outside accounting firms fill out the reports. With increasing practice, the task of completion becomes easier each year, and presumably less expensive.

There have been several revisions of the original Accounting and Reporting Systems for Hospitals. The Maryland Hospital Association reports that most hospitals do not have copies of these revisions nor as of March 1976 are many of them even aware that they are available.

IV. CHARACTERISTICS OF THE BASIC COST/BUDGET REPORTING SYSTEM

As we have already noted, Maryland's chart of accounts calls for functional cost centers to enable the Commission to compare costs among hospitals. These functional accounts are given equal weight with responsibility accounts, according to which occupancy statistics continue to be reported. Hospitals may enter transactions in the new functional accounts, either by changing their standard bookkeeping processes, by

treating the transactions as end-of-period accounts to be worked up by monthly allocations, transfers and adjustments, or by periodic recasting on worksheets.

The five-digit numerical coding system was adopted from the A.H.A.'s 1964 chart. The three digits to the left of a decimal are the control balance sheet, revenue and expense accounts required by the Commission. More detailed breakdown of accounts, described by digits to the right of the decimal point, need not be reported to the Commission but coding is presented to show the relationship of the A.H.A. chart's responsibility centers to the functional cost centers established by the Commission. Each general service cost center must be homogeneous with respect to function as defined by the Commission, or the cost contained therein must be identifiable by function. The account monitoring system of the A.H.A. chart is followed, but with some changes.

The 1975 HSCRC document, Accounting and Reporting System for Hospitals, is organized into five sections, dealing respectively with:

- accounting and reporting practices
- chart of accounts with definitions of the required expense accounts
- natural expense classifications
- statistics
- cost finding.

Most functional account centers are described at a general level of specificity illustrated in Exhibit A.

Exhibit A. Illustration of Account Description (Electroencephalography)

714 Electroencephalography

This account should be used to record the expenses incurred in providing electroencephalographic services, including salaries and wages paid to departmental personnel, supplies such as chart paper, ink, and printed forms, and repairs to equipment used in the department.

Special instructions on how to deal with common reporting problems, such as where to charge joint costs, often allow considerable leeway. For example, the Commission allows a hospital to include a cafeteria loss in its rates if the loss generated is in actuality a fringe benefit to employees, and is not excessive compared to similar hospitals. How to calculate cafeteria losses according to specific cost centers and to verify that they are in fact fringe benefits, is obviously a problem. HSCRC instructions on filling out the appropriate schedule are as follows:

> An equitable method of distributing personnel among the using cost centers should be selected by the hospital. For example, the total number of employees from each cost center could be identified through payroll records. Information could also be gathered through the use of a survey questionnaire. The important point to realize is that the more accurately this information is accumulated, the more accurately the costs of each center will be stated.

In their reports to the Commission, hospitals must record the direct cost of each patient care and auxiliary enterprise functional center before general service costs are apportioned.

The apportionment follows a prescribed step-down sequence. The statistical bases for apportionment are for the most part the same as those employed in the Medicare cost reports, with the same definitions, e.g., the plant operations base is "square feet", etc. Some are slightly different, for example, the laundry and linen base is pounds of soiled laundry processed.

Workload measures, for patient care services and for general service centers are for the most part standard units adopted by the A.H.A. in the 1954 edition of its chart of accounts. The exceptions are the relative value scales listed below, which are used to report activity in ancillary service centers.

Service Center	Type of Relative Value Unit
Laboratory	- The College of American Pathologists workload recording method for clinical laboratories
Radiology, including Nuclear Medicine, Radio-Isotopes, Diagnostic, Therapeutic	- American College of Radiologists relative value units
Pulmonary Function	- Connecticut Hospital Association relative value units
EEG and EKG	- California Medical Association
Physical Therapy	- California Medical Association.

For operating and recovery rooms, HSCRC prescribes minutes of use rather than number of procedures as the unit of workload measure.

The Account Classifications

The account classifications are designed to isolate the direct operating costs of patient service centers and general service centers, to ensure that these centers do not subsidize the research or "business" activities of the hospital nor unduly subsidize the costs of its education activities.

There are four major expense account classifications:

- Patient Care (37 required accounts)
- General Service (20 required accounts)
- Auxiliary Enterprises and Misc. Operating Expense (5 required accounts)
- Other Institutional Programs (7 required accounts).

Thus, all together, the Commission requires reporting according to a minimum of 69 expense accounts. In addition, the accounting system provides optional account numbers in most categories. The hospitals are not required to use HSCRC's numbering system for internal management, but must keep their accounts in such a way that reclassifications can be

made to the HSCRC system, providing an audit trail.

Patient Care accounts closely follow those of the 1966 A.H.A. chart with a few additions, such as renal dialysis. There are 20 daily care centers and 17 ancillary service centers. The Commission prescribes an unusually large number of General Service accounts so as to be able to isolate and compare the direct costs of such services among hospitals. Besides the usual categories, such as dietary, plant operations and employee benefits, HSCRC prescribes separate accounts for central supply, general fiscal support, management, medical staff administration, patient accounting, data processing, energy and other general services.

The Auxiliary Enterprise accounts include business-type operations of the hospital such as cafeteria, shops and private physician offices. Other Institutional Programs include formally organized education and research activities.

The revenue accounts correspond to the expense accounts, although they call for more detail as regards Auxiliary Enterprises, and include accounts for donations and the value of donated services, such as student nurse time.

Natural Expense Categories

The Commission has prescribed four basic natural expense classifications identifying the type of personal and material resources used in producing hospital services: personal services; contracted services; other expenses; and capital facilities and related expenses.

Personal services, the costs of staffing, are of four types:

- salaries and fringes of institutional employees
- physician fees
- imputed value of donated services
- purchased personal service (when such persons are directly supervised by institutional employees).

Five classifications of personnel are required:

- Physicians
- Residents and Interns
- Nurses and Technicians
- Management
- All Others

The number of full-time equivalent personnel are reported according to these categories. The Commission defines an FTE in terms of each 2080 hours worked per year, not numbers of people employed. This enables HSCRC to analyze unit costs in terms of direct labor inputs based on an imputed 40 hour week. This means that a resident or intern that puts in 60 hours per week would equal 1.5 FTE's.

Contracted services, as noted above, are limited to those where the entire responsibility for the service is purchased.

Capital facilities include the costs associated with the buildings and with major equipment items used at the cost center level, including depreciation for owned equipment and rental, lease and financing expenses for other equipment.

The Commission's minimum natural expense classifications are shown in Exhibit B.

EXHIBIT B: MINIMUM NATURAL EXPENSE CLASSIFICATIONS REQUIRED

Natural Expense Classification \ Cost Center Category	Patient Care Centers	Pharmacy and Central Supply	General and Admin. Services	Auxiliary Enterprise	Other Institutional Program	Capital Facilities Related - Non-Departmental	Fringe Benefits
Physicians	X						
Residents and Interns	X						
Management	X						
Nurses and Technicians	X						
Other Employees	X						
Total Personal Services		X	X	X	X		
Contracted Service	X	X	X		X		
Capital Facilities Related Expense	A	A	A	A	A	(A)	
Cost of Sales				X			
Detail of Fringes							X
Drugs/Medical Supplies		X					
Other Expenses	X	X	X	X	X		
Credits for Service Provided					X		

(A) In lieu of separate functional cost center accounts for equipment related expenses, the institution may elect to employ a single institution wide account with a subsidiary system which identifies location, depreciation, rentals and other costs with each item of equipment.

The Schedules

The Commission requires hospitals to fill out 43 schedules, as listed in Exhibit C.

EXHIBIT C: FORMS REQUIRED, BY TYPE AND NUMBER*

Schedule	Title
UBS	Balance Sheet - Unrestricted Funds
RBS	Balance Sheet - Restricted Funds
SFB	Statement of Changes in Equity
RE	Statement of Income and Expense
FP	Statement of Changes in Financial Position
A	Gross Operating Revenues
B	Fringe Benefits
I-1	FTE's - General Service, Auxiliary Enterprises and Other Institutional Programs
I-2	FTE's - Patient Care Centers
MS	Room and Daily Patients Care Center Statistics
NS	Ancillary and Outpatient Care Center Statistics
R	Hospital Based Physicians
DR	Dealings and Relationships with Certain Entities
OO	Data Concerning Owners and Related Organizations
	(Budget Schedules)
V-1	Forecasts of the Number of Inpatients and the Number of Patient Days
V-2	Forecasts of the Number of Outpatient Visits
V-3	Bases for Budgeting Ancillary Service Units
V-4	Computation of Volume Changes
V-5	EQUIVALENT INPATIENT DAYS
W	New Programs
S	Summary of Internal Budget Adjustments
C	GENERAL SERVICE CENTER BUDGETS
CWS	Service Center Worksheet
CC-1	Cafeteria
CC-2	Cafeterial Loss Treated as Fringe Benefit
CU	Energy Cost Center
D	PATIENT SERVICE CENTERS
E	AUXILIARY ENTERPRISES (AE)
F	OTHER INSTITUTIONAL PROGRAMS (OIP)
J	General Service Cost Apportionment
H-1	Building Facility Allowance
H-2	Departmental Movable Equipment Allowance
H-3	Distribution of Capital Facilities Allowance
H-4	CAPITAL FACILITY ALLOWANCE SUMMARY
H-5	Buildings/Equipment Fund Statement of Changes in Fund Balances
G	Other Financial Considerations
GR	Cash and Marketable Assets
GT	Charity and Bad Debt Allowances
K	Summary of Auxiliary Enterprises
L	Summary of Other Institutional Programs (OIP's)
M	PATIENT SERVICE CENTER SUMMARY
PD-1	Third Party Payor Differential
MA	RATE SUMMARY AND COMPARISONS

* Major Schedules are in capital letters

The hospital summarizes the budgeted expenses of each center on a special form, Schedule M, that aggregates expenses on three levels (see Exhibit D). Level I arrays the direct expenses of each service center, and the indirect expenses allocated to it from the general service centers. Level II adds the capital facilities allowances (calculated from the H schedules as noted in Exhibit C). At Level III, an allocation of the costs collected under the classification of Other Financial Considerations (bad debts, offsets from unrestricted funds, etc.) is made to each center. The final columns show the final rate calculations and display the Commission's adjustments.

V. VALIDATING, MANAGING AND USING THE INFORMATION

Until February 1976, the Commission had not conducted systematic desk or field audits of the data it received in its cost budget reports from the hospitals. Although it has full authority to do so under the law, its budget (about $500,000 per year) did not permit the requisite expenditures. Instead, the Commission relied on the required audits of the hospitals' financial statements submitted as part of the cost/budget report package. As of the date of this writing, however, an analyst for compliance has been added to the staff, and field audits have been completed or are in progress at several hospitals.

At first, these will be one or two day studies in hospitals that are undergoing special review.

Processing and Managing the Data

Editing of the data submitted by hospitals on budget reports is done by the Commission staff. Selected schedules are entered into a computer made available for time-sharing by the National Institutes of Health. The types of data that are computerized include:

EXHIBIT D:
PATIENT SERVICE CENTER SUMMARY
AVERAGE BUDGETED RATES
(SCHEDULE M)

INSTITUTION NAME ______________

INSTITUTION NUMBER ______________

BUDGET YEAR ______________

	V	D	J		H3		G		PD		
SERVICE CENTER	Budgeted Units	Direct Expenses	Allocated Expenses	Level I	Capital Facilities	Level II	Oth. Fin. Consid.	Level III	Payor Differ.	Avg. Rate Per Unit	Commission Adjust.
TOTAL											

- volumes of services, actual and projected;
- general service cost center workload statistics and costs; and
- patient service center costs (daily patient care and ancillaries).

In addition, HSCRC is building up a data bank on the basis of the special analyses it conducts of the hospitals singled out for review.

Analytic Reports

Using the data it routinely banks for screening purposes and to aid its individual hospital rate reviews, HSCRC is able to command certain standard reports from the computer. These reports are as follows:

EXHIBIT E: COMPUTER REPORTS GENERATED ROUTINELY

Average length of stay

- average length of stay in each patient service center
- percent occupancy in each patient service center

Average occupied beds

- total average occupied beds for each hospital

General Service cost center expenses

- expense per Equivalent Inpatient Day (EIPD) for each general service center
- expenses by units of activity, each cost center
- percent variable cost, each cost center
- summary of each hospital's general service cost
- costs per FTE for the general service cost centers

Patient Service cost center expenses

- expense per unit for each patient care center
- percent variable cost, each cost center
- summary of each hospital's patient care center costs
- cost per FTE for the patient care cost centers

Source: State of Maryland Health Services Cost Review Commission, Computer Operations Manual, printout, January 10, 1975.

These analyses are the basis of HSCRC screening to detect hospitals whose ratio of costs to services are above the 80th percentile for their group. Initially, the staff looks at the global summaries of cost ratios for the patient service and general service centers. Where these are out of line, they make more detailed analyses to discover the particular cost centers where the discrepancies lie.

In such cases, the computer analyses are followed up by special studies. For example, if high costs appear to stem from excessive personnel expense, the staff can first calculate the direct cost per unit on the basis of manhours worked. It can then go on to examine the differentials between the number of manhours worked per unit of service and corresponding number of paid manhours that include vacations, sick leave, etc.

Another type of analysis concerns the development of "target beds" for particular geographic areas referred to above, that guide the Commission's rate decisions on new facilities. The model devised by the HSCRC staff:

- starts with average admission per day to each care service;
- studies the range of variation from the average to determine peak periods;
- calculates the probability of distribution of admissions;
- matches the availability and utilization of similar services in other institutions within 15 minutes driving time of the hospital.

If the staff concludes that there is no need to continue operation of the patient care center, it will recommend that the Commission exclude from the hospital's future rate the share of capital allowance attributable to that service.* The purpose is to force hospitals over time to

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* Maryland's unique Capital Facilities Allowance, in lieu of depreciation, is described fully in Connections Between Rate Setting and Planning in Maryland and Rhode Island, op. cit.

consolidate their services, undertake joint programs, and the like. As of 1976, only one hospital has cut out a (pediatric) service. Others have been justified on appeal.

Analysis plans for the patient data forthcoming from Maryland's new uniform discharge abstract system will explicate relative costs per case according to primary diagnosis, and then according to variables such as age, secondary diagnosis, type of procedures performed, source of payment, and discharge disposition. These analyses will then be related to the unit cost analyses of patient service centers as a means of taking better account of differences in the nature of real hospital "products". They will enable the Commission to plot the burden of illness to which the individual hospital's services apply, and changes in this burden over time, as well as differences in diagnostic, age, and sex profiles in the hospital and among groups of hospitals as related to their costs.

Because HSCRC operates under a statute requiring full disclosure of all data on hospital costs, any analyses that it makes are publicly available. Taking advantage of this fact, the Maryland Hospital Association has an arrangement whereby it can gain access to the HSCRC data in order to create duplicate files in its own computer. This builds its capability to help hospitals avoid situations where they might be penalized in reviews, and to assist in their defense at such reviews. MHA may also bank the forthcoming patient data profiles.

VI. APPRAISAL OF THE PRESENT INFORMATION SYSTEM

Does the information HSCRC collects enable it to set rates in accordance with the Maryland legislature's criterion of "reasonableness"? That is, does it permit hospitals to render "efficient and effective service in the public interest on a solvent basis"? As regards HSCRC's efforts to take into account certain broad dimensions of efficiency and solvency, the information appears to support the programmatic objectives outlined earlier. Thus, the reports HSCRC assembles can:

- display direct unit costs in patient care and general service cost centers before allocations and thus make it possible to identify underutilizations, high staffing ratios, and other sources of high unit costs, and to reduce cross subsidization among centers;
- display special areas of suspected excess cost, e.g., the compensation arrangements of hospital based physicians, and trustees conflict of interest situations;
- distinguish between manhours worked (FTE basic calculations) and manhours paid through policy fringes;
- accumulate data that might be used as components of productivity screens, e.g., units of service in relation to manpower and supplies;
- (beginning in 1976) relate, through casemix profiles, variations in the expenses of patient service centers to variations in the burden of illness brought to them;
- identify the extent to which Medicare and Medicaid, and other third party payors reimburse under actual hospital costs and the extent of hospital losses from bad debts and free care, to permit rates paid by other payors to be increased so as to assure hospital solvency.

It cannot yet relate through casemix profiles, variations in the expenses of patient service centers to variations in the burden of illness brought to them, but hopes to be able to do so in the near future.

On the other hand, HSCRC collects little or no data of a type that could assist it to make judgments about the reasonableness of rates relative to the effectiveness of the various Maryland hospitals. As elsewhere, no patient outcome measures are attempted; even the more common

process measures of quality are absent from the Commission's deliberations.

HSCRC has attempted to improve the efficiency of the hospital industry by making what are, in effect, planning decisions that affect the introduction of new hospital services, the expansion of facilities and the phase out of unneeded services. This attempt, however, is handicapped by its lack of information in three crucial areas: the long range plans of individual institutions expressed in 5-year capital budgets; the boundaries of hospital service areas; and the absence of measures of hospital effectiveness already noted.

Special Strengths and Weaknesses of the Information System

The HSCRC admittedly collects far more data from hospitals at the present time than it has the ability fully to analyze and use, forcing it to become highly selective in its rate review activites. However, a great majority of the data is analyzed to provide a base from which the rate reviews are conducted. The addition of hospital casemix profiles should greatly expand the equity of hospital reviews by introducing some measure of patient care differentials in daily patient care centers, but this may compound the problem of information overload. It remains to be seen whether a streamlined program of computer reports on patient utilization can be designed to alleviate the problem.

Under the best of circumstances, HSCRC is bound to be handicapped by its broad definitions of patient service centers, and the looseness of reporting instructions in its chart of accounts and reporting systems, compared, for example, to the charts recently adopted in many new Western states. Taken together with the extremely crude grouping system employed in Maryland (urban/rural), hospitals with cost centers that HSCRC discovers to be "out of line" will in a great many instances be able to show either that the reporting of costs has followed such different conventions in comparison hospitals, or that the cost centers so differ in actual function from those in the comparison group hospitals that "inefficiencies"

cannot be demonstrated. On the other hand, HSCRC is giving the hospitals an exercise in cost comparisons on the basis of cost data that for the first time even begin to be comparable in respect to function. While the Maryland Hospital Association is banking data from the HSCRC reports and analyses primarily as a defensive move, whatever the motive, as hospitals begin regularly to compare notes on their costs, they can be expected to gain knowledge that should, in fact, improve the efficiency of such operations as are under the control of their administrators and trustees.

The lack of audited historical data for the individual hospitals creates other problems for HSCRC. This lack is particularly serious since most of the hospitals in Maryland raised their charges shortly before the required reporting to HSCRC began - thus inflating the base on which all future rates would be calculated. Federal wage price controls were lifted in April 1974, and the HSCRC controls were to be implemented three months later. Hospitals reacted accordingly.

The final, and perhaps most serious shortcoming of the Maryland data is the absence of quality control on their accuracy. Any switch to a new reporting system is bound to be accompanied by a heavy incidence of honest error.* The problems in the reporting of units of service may, moreover be more common and more difficult to detect than those surrounding the reporting of financial data, particularly when hospitals must adopt new activity statistics, such as the several relative value scale systems. Since the Commission in the past commanded neither routine desk audit nor field audit capabilities, such errors may well be built into the rate base from which future increases will be projected. This lack of audit may also have tempted hospital managers to be somewhat less than scrupulous in their reporting of both dollars and activity units

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* One large Baltimore hospital volunteered at a rate hearing its discovery of a $150,000 error in its cost report a year after it had been filed with the Commission. Despite the fact that this hospital had been singled out for special HSCRC staff analysis and public hearings, the error had not been detected.

if scrupulousness could adversely affect their institution's financial health.

Exhibit F summarizes these and other general observations on the Maryland information system in line with the criteria developed for the June 1975 conference: Issues in Uniform Reporting for Hospital Rate Review.[2]

EXHIBIT F: SOME STRENGTHS AND LIMITATIONS OF THE MARYLAND INFORMATION SYSTEM

Strengths	Limitations
- The addition of patient data to the financial data presently being collected will enable HSCRC reviewers to gain a truer perspective on the meaning of cost differences among hospitals by relating these to differences in burden of illness.	- The Commission lacks several other important types of data, namely: - composition of medical staffs, board certifications, etc. - accreditation status - teaching program approvals - patient outcomes
	- Only two variables (geographic location and teaching) are employed to classify hospitals into comparison groups. Lack of grouping refinement impairs HSCRC's capability to make valid comparisons of productivity.
- The Commission has actively cooperated with other potential data users to develop a common information system to generate the reports each requires from uniform hospital abstracts.	- The Commission is not represented on the governing board of the Maryland Health Resource Center, where disclosure policies and quality control measures will be decided.
- Inflation indicators are monitored frequently and are selected to take account of differences in labor costs in the two metropolitan areas of the state.	- Changes in salaries of technical, professional, and managerial level personnel are not accounted for; inflation in the cost of most hospital supplies is not accounted for.

Strengths	Limitations
- Hospital participation in the design of many aspects of the report system, especially the functional cost centers, helped to promote understanding of the system.	- The reporting forms were not pretested before their adoption. Their format led to confusion; instructions were not always clear.
	- No regular mechanism exists for hospitals to provide feedback to the Commission on design aspects of the information system.
- Introduction of the new cost/budget reporting system was followed up by technical assistance to the hospitals.	- Orientation to the new reporting system was directed to hospital administrators, not financial officers.
	- Insufficient time and insufficient funds for introducing the new system to the hospitals resulted in reports of uneven quality during the first report years.
- The cost/budget report schedules and HSCRC routine computer reports are organized to display direct costs per unit of service and, because functional accounts are used, cost comparisons among hospitals are more feasible now than ever before.	- More patient care cost centers may be needed to reflect the complexity of services rendered by some hospitals. Overly broad aggregations of special services within a single cost center destroys the validity of cost comparisons.
- Such displays can show areas of excessive staffing in relation to utilization and should encourage flexible staffing and budgeting and/or shared services with other hospitals.	- The HSCRC chart of accounts and budget instructions on reporting are often too general, leading to differences in recording that, again, weaken the ability to make valid inter-hospital comparisons.
- The use of relative value scales for many ancillary services permit a truer picture of costs related to the complexity of work performed than do simple counts of units of service.	- The traditional activity measures employed for general service centers and the EIPD as the unit of measure for daily patient care services are recognized as unsatisfactory.
	- Out of line hospitals may be tempted to fudge on the reporting of activity units to avoid the appearance of inefficiencies.

Strengths	Limitations
- The patient data system will soon enable HSCRC to identify lengths of stay for given diagnoses and procedures that are out of line with practice norms.	- At present, HSCRC has no way of identifying inappropriate admissions, procedures and lengths of stay leading to excess costs by links to utilization reviews.
- The budgeting system may encourage small and medium sized hospitals to institute internal control systems and to effect operating efficiencies.	- Some of the accounts such as Central Supplies, Other Administrative Expenses and Admissions are difficult to recast from hospital responsibility accounts and are resented by some hospitals.
	- The account numbering system is too limited to permit large complex institutions to adopt it for their own internal control systems.
- Analysis of physician compensation arrangements coupled with public disclosure might provide a handle on overly high payments to hospital-based physicians.	- Disclosure encourages such physicians to move towards direct billing of patients, removing them from controls either by the hospitals or by HSCRC.
- HSCRC is committed to meeting the financial requirements of efficient and effective hospitals. Its cost/revenue analyses enable it to determine the extent of any shortfalls from payors and to compensate for them in rate adjustments.	- Shortfalls and bad debts are difficult to project for budgetary purposes; poor projections could lead to an overly high or an overly low charge structure.
- HSCRC compiles and analyzes data for the Commission's use to discourage unnecessary hospital expansions.	- HSCRC lacks the fundamental tool of hospital planning--population data related to specific hospital service areas. It also lacks information on the hospital's long-term capital budget plans.
	- Travel times are based on broad brush estimates.

Strengths	Limitations
- The HSCRC's proposed timetable for cost/budget report submission will simplify the reporting process for hospitals and make base year cost reports compatible with audited financial statements.	- Since the reports will not be submitted until the end of the first quarter of the budget year, and since any special reviews, hearings and rate orders often take many months more to complete, hospital rates will, in effect, become established retrospectively rather than prospectively except for increases projected to cover wage and price inflation.
- The new combined cost/budget reports will facilitate spot check auditing.	- The most serious shortcoming of the program so far has been the failure to audit the hospitals' compliance with the requirements of the cost/budget accounting and reporting system.

VII. FUTURE PLANS

HSCRC plans to move along several fronts in the immediate future to improve the quality of its data and data use. Besides adding the patient data component of the system, it plans to undertake more systematic audits of reporting compliance. Another change will be to conduct closer analyses of the personnel costs already reported by the hospitals; several new computer reports may be generated. Finally, the Commission intends to monitor the prices of seventy percent of the supply items used in laboratories, radiology, pharmacy, medical/surgical services, dietary and other centers, both to improve the accuracy of the inflation factor and to inform hospitals about best buys. This monitoring, plans for which are in the final stages of development, will be conducted by hospitals selected by HSCRC. They will report their actual purchase costs of designated items in each of the above supply categories during two quarters of the fiscal year.

FOOTNOTES

1. Maryland Health Service Cost Review Act, Annotated Code of Maryland, Article 23.

2. Maryland Health Services Cost Review Commission, Report to the Governor, Fiscal Year 1975, pp. 60-61.

3. The criteria for the conference along with its proceedings have been published as: Uniform Reporting for Hospital Rate Reviews: Criteria to Guide Development and Proceedings of a 1975 Conference, by Katharine G. Bauer, under DHEW contract #600-75-0142, and may be obtained from the office of Research and Statistics, Social Security Administration.